

CLAIMS

1. (currently amended) A method of reducing the inhalation of airborne respirable droplets having a diameter of less than 10 micrometres that are produced by spraying liquid droplets from an aerosol spray device, which method comprises imparting a unipolar charge to the liquid droplets by double layer charging during the spraying of the droplets from said spray device, the unipolar charge being at a level such that the droplets have a charge to mass ratio of at least $\pm 1 \times 10^{-4}$ C/Kg and being imparted to said droplets solely by interaction between the liquid and the spray device without any charge being imparted thereto from an internal or external charge inducing device, whereby, as a result of mutual repulsion, at least 10% by volume of the airborne droplets having a diameter of less than 10 micrometres, which otherwise would enter the lungs of a human or animal, are dispersed in the atmosphere to a greater extent than uncharged or lesser-charged particles and deposit in the vicinity of the mouth, nose or upper respiratory tract rather than entering the lungs.
2. (previously presented) A method as claimed in claim 1 wherein at least 25% by volume of the airborne respirable droplets having a diameter of less than 10 micrometres do not enter the lungs.
3. (previously presented) A method as claimed in claim 2 wherein at least 40% by volume of the airborne respirable droplets having a diameter of less than 10 micrometres do not enter the lungs.
4. (previously presented) A method as claimed in claim 3 wherein at least 75% by volume of the airborne respirable droplets having a diameter of less than 10 micrometres do not enter the lungs.
5. (cancelled)

6. (previously presented) A method as claimed in claim 1 in which the spray device contains an emulsion.

7. (previously presented) A method as claimed in claim 6 in which the liquid droplets have a size in the range of from 5 to 100 micrometres.

8. (previously presented) A method as claimed in claim 7 in which the spray device contains a composition comprising an oil phase, an aqueous phase, a surfactant and a propellant.

9. (original) A method as claimed in claim 8 wherein the oil phase includes a C₉-C₁₂ hydrocarbon.

10. (original) A method as claimed in claim 9 wherein the C₉-C₁₂ hydrocarbon is present in the composition in an amount of from 2 to 10% w/w.

11. (previously presented) A method as claimed in claim 8 wherein the surfactant is glyceryl oleate or a polyglycerol oleate.

12. (previously presented) A method as claimed in claim 11 wherein the surfactant is present in the composition in an amount of from 0.1 to 1.0% w/w.

13. (previously presented) A method as claimed in claim 8 wherein the propellant is liquefied petroleum gas.

14. (original) A method as claimed in claim 13 wherein the propellant is present in the composition in an amount of from 20 to 50% w/w.

15. (cancelled)

16. (previously presented) A method as claimed in claim 7 wherein the required charge to mass ratio is imparted to the liquid droplets as a result of the use of an aerosol spray device with at least one of the features of:

- (a) the material of the actuator,
- (b) the size and shape of the orifice of the actuator,
- (c) the diameter of the dip tube,
- (d) the characteristics of the valve, and
- (e) the formulation of the composition contained within the aerosol spray device

being chosen in order to achieve said droplet charge to mass ratio by double layer charging, thereby imparting the unipolar charge to the droplets during the actual spraying of the liquid droplets from the orifice of the aerosol spray device.